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Northrup, King & Co.'s
Information
on
Farm Seeds



COMMONLY ACCEPTED BUSHEL WEIGHTS

AND QUANTITIES OF SEEDS USUALLY SOWN PER ACRE

Farm Seeds and Grasses	Lbs. per bu.	Quantity, per Acre
Alfalfa	60	15 to 20 lbs.
Barley	48	96 lbs.
Beans, Field	60	40 to 60 lbs.
Beans, Lima	56	60 to 90 lbs.
Bromus Inermis	14	15 to 20 lbs.
Buckwheat	50	50 lbs.
Clover, Alsike	60	8 to 10 lbs.
Clover, Medium Red	60	10 to 12 lbs.
Clover, Mammoth Red	60	8 to 12 lbs.
Clover, Sweet	60	12 to 15 lbs.
Clover, White	60	5 to 8 lbs.
Corn, in hills.....	56	8 to 10 lbs.
Corn, in drills for soiling or silo where ears are desired.....	56	8 to 10 lbs.
Corn for Fodder.....	56	30 to 56 lbs.
Cow Peas, broadcast.....	60	60 to 90 lbs.
Flax, broadcast	56	25 to 30 lbs.
Grass, Canadian blue (solid seed)....	14	15 to 25 lbs.
Grass, Kentucky blue (solid seed)....	14	20 to 30 lbs.
Grass, English or Perennial Rye Grass	24	25 to 30 lbs.
Grass, Italian Rye Grass.....	24	35 to 40 lbs.
Grass, Meadow Fescue	24	20 to 25 lbs.
Grass, Orchard	14	22 lbs.
Grass, Red Top (solid seed).....	32	8 to 12 lbs.
Grass, Lawn Seed, 1 lb. for 300 sq. ft..	..	100 to 125 lbs.
Grass, Western Rye or Slender Wheat Grass	14	15 lbs.
Grass, Meadow Fox Tail.....	14	22 lbs.
Grass, Tall Meadow Oat.....	14	30 to 40 lbs.
Kaffir Corn, broadcast.....	56	40 to 50 lbs.
Millet, for hay	50	50 lbs.
Millet, for seed	50	30 lbs.
Oats	32	64 to 96 lbs.
Peas, in drills	60	120 to 150 lbs.
Peas, broadcast	60	150 to 180 lbs.
Rape, Dwarf Essex, alone, broadcast ..	50	6 to 8 lbs.
Rape Dwarf Essex, alone, in drills	50	4 lbs.
Rape Dwarf Essex, with grain	50	1½ lbs.
Reed's Canary Grass or Phalaris.....	32	4 to 6 lbs.
Rye, broadcast	56	56 to 84 lbs.
Sorghum, for syrup	50	8 to 10 lbs.
Sorghum, for fodder	50	50 to 60 lbs.
Soy Beans, broadcast.....	60	30 to 45 lbs.
Soy Beans, in drills.....	60	60 to 90 lbs.
Speltz	40	80 lbs.
Sudan Grass, broadcast	40	20 to 25 lbs.
Sudan Grass, in drills	40	8 to 10 lbs.
Timothy	45	10 to 12 lbs.
Vetches, broadcast	60	50 to 60 lbs.
Wheat	60	90 lbs.

FIELD CORN

Sterling Seed Corn Is Fire Dried During Oct. and Nov. Assuring Vigorous Germination.

Sterling Seed Corn is all grown from Northrup, King & Co.'s selected private seed stocks, and under their personal supervision, then dried by their special process to 12 per cent moisture before cold weather. Northrup, King & Co.'s experience of about fifty years as seed corn specialists has proven to them conclusively that no less care in selecting, growing and handling can produce seed corn which is of extra dependable value to the ultimate consumer.

When you buy a bag of genuine Sterling Seed Corn you are assured of proper early maturity and trueness to variety, as well as vigorous germination. The Sterling standard of germination is 90 per cent or better.

Evidence that their efforts in producing better seed corn are appreciated is shown by the fact that much more Sterling Seed Corn is planted in the Northwest every year than of any other brand.

**STERLING
SEED CORN**



CENTRAL MINNESOTA STRAINS

Minnesota No. 13. The commanding points of excellence which place Minnesota No. 13 Corn at the head of all yellow dent varieties for Northern planting are its earliness, enormous yield and adaptability to a great variety of soils and climates. Considered by the experiment stations to be the best yellow dent corn for Minnesota, Wisconsin, North and South Dakota. Matures in 90 to 100 days.

Northwestern Dent. In North Dakota, northern Minnesota and in high altitudes this variety can be relied upon to mature before any other dent corn. Frequently yields 75 bushels per acre and matures in 85 to 90 days. Kernels red with yellowish cap. Ears are 7 to 10 inches long and bear 10 to 14 rows. Very desirable for late planting or replants. May be sown in check rows or drills. Average height stalk, 7 feet, 8 inches. Our seed comes from stock bred up to highest standards.

Rustler White Dent. Early White Dent (14 to 18 rows). For early ripening, great yield and compact growth of ears it is one of the best; admirably adapted to a northern climate. Average height of stalk, 8 feet; average distance base of ear from ground, 3 feet 6 inches.

SOUTHERN MINNESOTA STRAINS

Early Murdock or Wisconsin No. 13. Suitable for Southern Wisconsin, Minnesota and South Dakota. This is a standard and well known yellow dent variety in Iowa and southern Minnesota.

It is considered one of the most productive and as early as any of the deep-kerneled varieties. It is well established in type and is growing in favor with those who know it. It is one of the most dependable of the later varieties. It has a stout, stiff stalk which stands well in storms, growing 6 to 8 feet high. The ears are borne well up on the stalk. It almost invariably yields well and with good care and favorable conditions, will give very large crops. Matures in 100 to 110 days.



No.
Dak.
Flint

Mercer
Flint

Triumph
Flint

Long-
fellow
Flint

Minn.
No. 23

FIELD CORN—Cont.

**STERLING
SEED CORN**



Silver King. Also known as **Wisconsin No. 7** or **Silver Jewel.** This variety of snow white corn is increasing in popularity. The stalks bear well, frequently two ears. The ears run 16 rows on the average, are well filled both on tips and butts and uniform in size and type. This Corn is best adapted for southern Minnesota, southern South Dakota, southern Wisconsin and northern Iowa. 100 to 105 days are usually required to mature.

WISCONSIN VARIETIES

Wisconsin No. 12—Golden Glow. A popular yellow dent variety, developed by the Wisconsin Experiment Station. Larger than Minnesota No. 13—also later, maturing in 100 to 110 days. Adapted for husking in Minnesota and Wisconsin as far north as Minneapolis.

Wisconsin No. 8. A yellow dent strain developed by straight selective breeding from the Minnesota No. 13 variety by Wisconsin Experiment Station. Matures in 90 to 100 days and grows 6 to 8 feet tall. Adapted for husking through central and northern Wisconsin.

Wisconsin No. 25. An extra early yellow dent variety developed at one of the Northern Branches of the Wisconsin Experiment Station. Similar to Extra Early Minnesota No. 13, but the ears have fewer rows and kernels are broader. Matures in 85 to 95 days. Adapted to husking throughout Northern Wisconsin. A very useful variety.

NO. MINN., NO. DAK. and MONTANA STRAINS

Extra Early Minnesota No. 13. (Haney Strain) A yellow dent which matures in 85 to 95 days. Adapted for husking in Northern Minnesota, North Dakota and Montana.

Extra Early Northwestern Dent. A strain about a week earlier than the standard Northwestern Dent. Adapted for husking on both sides of Canadian border and for bundle feeding. Matures in 80 to 90 days.

Gehu Flint. This yellow dwarf flint variety was introduced in 1889 and is supposed to be a cross between an 8 row yellow squaw flint and Mercer. Grows 4 to 6 feet tall and matures in 80 to 90 days. The earliest yellow variety. Ears grow close to ground making it desirable for early hogging down.

Mercer Flint. Probably the most popular medium early yellow flint in the Northwest. Adapted to husking where Extra Early Minnesota No. 13 will mature. Excellent for ensilage and fodder farther North.

North Dakota White Flint. Resulting from a careful selection of Squaw corn for many years. Very much better than the Squaw. Average height stalk 5 feet, average distance base of ear from ground 1½ feet. Average length of ear 6 inches. Matures in 75 to 85 days.

KINGSCROST CORN

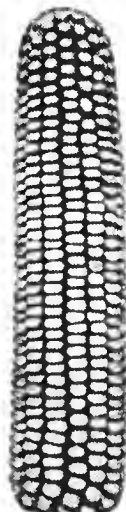
"Kingscrost" is a special name created and registered by Northrup, King & Co. to distinguish their special varieties produced by their inbreeding and crossing method.

The four strains of Kingscrost Field Corn are crosses or hybrids between inbred strains developed by Northrup, King & Co. through an extensive modern corn breeding program started in 1922.

It is entirely different from the regular varieties, both in the methods by which it was bred and the method of growing the seed. Production of Kingscrost corn is carried on so that the seed is newly crossed each year.



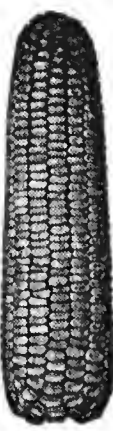
Rustler
White
Dent



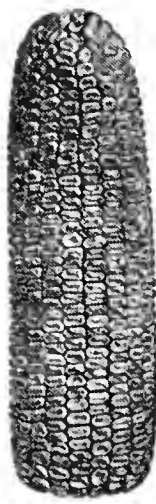
North-
western
Dent



Minn.
No. 13



Ex. Early
Minn.
No. 13



Murdock

FIELD CORN—Cont.

KINGSCROST CORN—Cont.

Only newly crossed seed from this method of breeding is valuable. The second year after the cross the strain does not perform at all like the first year and is quite inferior seed, therefore should not be saved and replanted from a crop planted with Kingscrost corn.

There are four strains of Kingscrost corn to fit the growing seasons of various sections.

Kingscrost Extra Early Minnesota No. 13. Is slightly earlier than Haney Strain and is adapted to sections farther North than the Medium Early Strains.

Kingscrost Medium Early Minnesota No. 13. This cross is not quite as early as Haney Strain and is adapted to North Central Minnesota, Southern North Dakota and Northern Wisconsin.

Kingscrost Minnesota No. 13. For sections where standard Minnesota No. 13 is adapted although it is about two days earlier. It has shown average yields of grain 8 to 10 bushels per acre higher than Minnesota No. 13 and ensilage yields $2\frac{1}{4}$ tons per acre higher than Minnesota No. 13 and Golden Glow.

Kingscrost Reid's No. 13. For Northern Iowa and Southern Minnesota and like territories. It is about the same earliness as Golden Glow and Murdock. It has yielded an average of 11 bushels per acre higher than the regular varieties in the sections where it is adapted. It is a cross between inbred strain of Reid's Yellow Dent and of Minnesota No. 13 strain.

ALFALFA

Cossack Alfalfa. One of the variegated sorts and shown by State and Government tests to be hardy and productive. Introduced by Prof. Hansen of the South Dakota Experiment Station after visits to Siberia where he conducted investigations for the U. S. Government and State of South Dakota. This variety is in some sections considered equal to Grimm for productiveness and frost resistance.

Dakota Grown Alfalfa. Commonly sold as Dakota No. 12. Generally considered equally as hardy as Montana seed.

Grimm Alfalfa. Bulletin 209, U. S. Dept. of Agriculture, records that Grimm Alfalfa was introduced into Carver County, Minn., in 1857, by Wendelin Grimm, an immigrant from Europe. His original lot of seed, which did not exceed 15 or 20 pounds, was sowed in the spring of 1858. Several years passed before sufficient seed was raised to afford opportunity for distribution. The Minnesota Agricultural Experiment Station took up the subject and efforts were made to extend Grimm culture. In 1905 the U. S. Dept. of Agriculture began to experiment with this variety and since then it has been grown in comparison with a large number of varieties and strains and in practically every case has proved itself equal, if not superior, to any of these in hardiness.

Idaho Grown Alfalfa. Idaho Alfalfa is grown in the isolated mountain valleys of Idaho, at an average elevation of 4,000 to 5,000 feet. Idaho grown Alfalfa Seed is preferred by many.

Montana Grown Alfalfa. Montana grown Alfalfa is extremely hardy and some prefer it to seed from any other locality. Our seed is obtained in those sections where plants have endured the extreme cold of winter and thrive in high altitudes. It is highly recommended for planting in the Northwest. Recent experiments of both the Minnesota and North Dakota Experiment Stations have established the superior hardiness of Montana grown Alfalfa.

Utah Grown Alfalfa. Utah Alfalfa is grown in the rugged inter-mountain country at an average elevation of 4,000 to 5,000 feet. Weather conditions throughout this section are unusually severe, being extremely hot in summer with extremely low temperature in winter.

CLOVER

Alsike or Swedish Clover. One of the hardiest varieties known. It will do better on moist land than any other variety of Clover, and is suitable for either hay or pasture. When sown with other grasses, it forms a thick undergrowth and greatly increases the yield. It is frequently sown both with Medium Red Clover and with Timothy, and the quality of hay thus produced is excellent. Finer and more leafy than Medium Red Clover and cattle prefer it.

CLOVER—Cont.

Mammoth Red Clover. This is grown largely for pastures and to restore fertility to depleted soils. It makes good hay if cut soon enough although it has a coarser stem than the Medium Red Clover. Mammoth Red Clover supplies fine grazing for stock. It sometimes yields more seed than Medium Red Clover. Being a rank grower it is very valuable for fertilizing purposes. The foliage, flowers and stem are darker in color than the Medium Red Clover. It ripens later, and makes only one crop. Especially valuable on light sandy lands.

Medium Red Clover. This is regarded as the most valuable of the Clover family. It is sometimes called June Clover and is a dependable all-round variety for farmers and stockmen. It makes two crops the second year. The first is usually cut when it is in blossom for hay; the last crop may be harvested for seed, cut for hay, or plowed under to add fertility to the soil. It may be sown either in the spring or fall, and if no other grasses are used, at the rate of from 12 to 15 pounds to the acre, according to quality and seed used and condition of the soil. Clover adds greatly to the fertility of the land on which it is grown. It does not exhaust the soil, but enriches it. It pays always to buy the best Clover seed which can be obtained. Even though the first cost is twice as much as cheaper seed, it will be found in the long run that inferior seed is the most expensive, not only on account of less hay or seed being produced from it, but from the fact that one's land becomes infested with weeds.

Sweet Clover, Dwarf Crystal or Grundy County. This variety is supposed to have originated in Grundy County, Ill. In the Northwest it was first grown in the Red River Valley, in North Dakota, 1920. A biennial white blossom sweet clover that grows to the height of 3½ to 5 feet. Low branching, has finer stems than other varieties and matures earlier. Sow 10 pounds of seed per acre.

Sweet Clover, White Blossom. This valuable forage plant is now grown on almost every farm in the Northwest for hay, pastures, seed and as a wonderful soil builder. It puts more nitrogen in the soil per acre than 20 tons of barnyard manure. It makes pasture earlier than other crops and will keep stock in good condition until winter regardless of heat and drouth. All kinds of live stock soon learn to like it and make wonderful gains in flesh during the entire season.

Worn out fields soon become profitable where sweet clover is grown for pasture or plowed down while green. The crop is very dependable and profitable. The white blossom variety is a biennial and most popular with growers.

Sweet Clover, Yellow Blossom. This variety belongs to the same family as White Blossom Sweet Clover but it is not so prolific in growth, will not produce so large a tonnage, does not grow quite so tall, but is from ten days to three weeks earlier. A biennial.

The flowers are yellow instead of white. For bee pasture and fertilizing purposes, we believe it to be equally valuable. For pasture, many prefer it.

White or Dutch Clover. A low, close growing Clover: round, white heads, very fragrant. Very desirable for beautifying the lawn. It will stand close cutting and very rapidly throws up an abundance of leaves and blossoms. It is usually better to sow with other grasses.



Nitragin. A practical culture by which nitrogen gathering bacteria are placed in the soil along with seeds of all legumes such as clover, alfalfa, beans, peas, etc. In ordering always mention legume to be inoculated.

GRASSES

Bromus Inermis. Drought defying, frost resisting. Yields enormous crops of splendid hay and affords early and abundant pasturage. It starts from two to three weeks earlier in the spring than native prairie grass and it keeps green in the autumn longer than most of the useful grasses grown in the West. No amount of cold seems to be able to kill it. It bears up well under hot summer suns. It will grow under conditions that are very dry and it can also stand being covered with water, not deep, of course, for one or two weeks in the early spring. 15 pounds of good Bromus Inermis seed per acre is sufficient.

GRASSES—Cont.

Kentucky Blue Grass. This makes the best, sweetest and most nutritious pasture for all kinds of stock. It is very hardy and is uninjured by cold or dry weather, hot sun or tramping of hoofs. The roots are so thick and stout that they form a tough sod. Blue Grass requires two years to get well started and for that reason it is often sown in mixture with other grasses. Sometimes called "June Grass." From 20 to 25 lbs. of "Northland" Brand seed required to the acre when sown alone.

Red Top (Solid Seed). A valuable grass for moist rich soils where it thrives very luxuriantly. It is a good variety to sow with Timothy and Clover for meadow or pasture and is more permanent than either of the other two. It should be fed close. If it is allowed to grow up to seed, the cattle dislike it. On good soil it grows about two feet high; on poor gravelly land about half that height. It has been grown successfully even on alkali land where other grasses failed. Red Top is commonly known as Herd's Grass and should be more extensively grown, especially in combination with other grasses. Solid Seed Red Top is free from chaff and weighs 14 pounds to the bushel. Only ten pounds of "Northland" Brand required to the acre.

Reed Canary Grass, or Phalaris. "It thrives in locations where the water table is practically at the surface of the soil all the time and above the surface part of the time. No other forage crop, the seed of which is available in quantity, will thrive so well on highly productive lands that are too wet for most other crops. Broadcast 4 to 6 lbs. per acre." Taken from Special Bulletin No. 137, University of Minnesota Agricultural Extension Division.

Timothy. As a crop for hay, Timothy is probably unsurpassed by any other grass. It is greatly relished by all kinds of stock especially horses. It yields more nutritive matter than any other grass or forage plant. It is not suited for a permanent pasture as it will in the course of a few years run out. It is, however, well adapted to early spring grazing as it starts up quickly in the spring, and in favorable fall weather can be pastured in the autumn as well.

AMBER CANE

Minnesota Sorghum or Amber Cane. This is an early variety of sorghum that was originated in Minnesota and has been, by careful selection, very much improved as to its sugar content during recent years. It is especially valuable for the manufacture of sorghum syrup which is now a profitable and staple product on many farms in the Northwest. Many stockmen prefer to plant the Minnesota sorghum for forage purposes because of its earliness and high sugar content. It produces a tonnage almost equal to the southern sorghum and makes a crop of seed of high feeding value in addition to the forage. Plant in drill rows and cultivate the same as corn.

Southern Cane. This variety does not mature so early as the Minnesota Sorghum, but the yield is usually heavier. When Sorghum is grown for fodder only, the Southern Cane will give the greatest tonnage and is usually grown on that account by dairymen, to feed their milch cows. It is also desirable when grown as a pasture plant for sheep, hogs or cattle. All kinds of stock eat it readily. Southern Cane is not suitable for making syrup when grown in the North, but for feed is splendid.

FIELD PEAS

Canada Field Peas, Yellow. Height of vine $3\frac{1}{2}$ to 4 feet. This variety is extensively grown in Canada, Wisconsin and other pea growing sections, and has a large sale, not only for agricultural purposes, but for use in soups.

White Marrowfat. Height $3\frac{1}{2}$ feet. Grown on account of the great quantities of pods which it bears and for canning purposes. The vines are of strong, sturdy growth but mature the pods quite late. The large, cylindrical, light colored pods are well filled with round, smooth, light yellow peas of somewhat dry and mealy quality.

MILLET

Early Fortune (Red Proso). The seed is of a beautiful red color and distinguished in appearance, two or three times the size of German Millet. This variety heads in from 25 to 35 days. It

MILLET—Cont.

gives a large yield both of seed and fodder. It can be fed to horses and other stock without injury, even when cut so late that the seed has formed. The seeds are smooth, the heads are branching, and in other respects this variety is similar to Hog Millet except for the color of the seed.

German Millet. German Millet is very sweet, palatable, and when fed to dairy cows produces a large amount of milk. On good rich soil it grows four to five feet high. It is very tender if cut at the right stage, which is when it is in full bloom. About three-fourths of a bushel of seed is sown to the acre. A good yield is from three to five tons of hay to the acre.

Broom Corn or Hog (White Proso). This is grown for the same purpose for which other Millets are sown, but makes inferior hay unless cut very young. Seed also makes very fine feed for poultry and young chicks. It will mature in about two months from sowing seed.

Hungarian. (Dark Seed.) Often called Hungarian Grass. The hay is fine and of excellent feeding value. It is especially valuable on account of requiring such a short season to make a fine crop. Frequently used as a catch crop. Hungarian Millet does not grow so coarse as some other varieties, but still yields from two to four tons of hay to the acre.

Japanese Millet. Improperly called "Billion Dollar Grass." Entirely distinct from all other Millets. It grows from 6 to 9 feet high, stands up remarkably and yields enormous crops. When cured it makes good hay and in quality is superior to corn fodder. It is relished by all kinds of stock. It may be sown broadcast at the rate of 15 pounds an acre, but it is better to sow in drills 12 to 18 inches apart, using 10 to 12 pounds to the acre. It does best on low moist ground.

Siberian Millet. Earlier than either German Millet or Hungarian, and consequently very valuable for the North and yields remarkably. It is extremely hardy, withstanding drought wonderfully and is about two weeks earlier than the German Millet. The leaves are very tender, making it excellent for hay. The plant stools to a remarkable degree, as many as thirty to forty stalks have been grown from one seed, and is not subject to rust.

White Wonder. A variety which has been found to be a heavy yielder as well as very early. The foliage is very heavy, the leaves broad and cure readily. Earlier and more productive than German Millet but not as early as Siberian.

DWARF ESSEX RAPE

It is an annual, bearing a close resemblance in leaf and stalk to the Ruta Baga, but both leaves and stalk are more numerous in the Rape plant, and of a taller habit of growth. It is a pasture plant which may be eaten off by any kind of live stock, but it is pre-eminently fitted to furnish pasture for sheep, cattle and swine.

A good crop will furnish at least 12 tons of green food an acre.

Dwarf Essex Rape thrives best on a good soil, rich in vegetable matter. Slough lands are excellent. When rape is sown broadcast, 5 pounds of seed an acre will suffice. When sown in rows, say thirty inches apart, and cultivated, from 1 to 2 pounds an acre will be enough.

· SOY BEANS

This crop has become quite popular in the Northwest during the last few years, due to the discovery of early maturing varieties. For a long time it has been grown extensively in the South. Soy Beans are grown for hay, ensilage, grain and soil improvement. They produce a quality of hay equal in feeding value to Alfalfa and are valuable for planting where Clover has winter killed. For silage they are planted with corn using about 10 pounds of seed per acre, producing silage of higher feeding value than corn alone. The ground beans are equal to or better than Oil Meal for mixing with home grown grains to balance the dairy ration. Being a legume, like Clover, Soy Beans improve the soil on which they are grown. Sometimes they are plowed under as a green manure crop.

The standard hay varieties for Minnesota, Wisconsin and Iowa are Manchu, Illini and Dunfields.

SUDAN GRASS

The ideal Emergency Hay and Pasture crop for late planting. For best results, broadcast 30 to 40 pounds per acre, after the ground is thoroughly warm. May 15 to June 15, on the average, is as early as it is practical to sow Sudan, and it may be sown as late as July or August. Never plant until ground is thoroughly warmed.

BARLEY

Manshury Barley. Manshury Barley represents the combined efforts of Experiment Stations and barley experts to produce a variety which will yield plump grains with the greatest protein content, as well as strong, stiff straw and long, well filled heads. In quality, both as to feeding value and for malting purposes, no other barley excels it. It yields abundantly. It is early and very vigorous in growth. The straw is stiff and strong. Seldom does a field of this grain lodge. The heads are long and well filled, grain plump and of best quality.

Oderbrucker or Wisconsin No. 55 Barley. Oderbrucker is a stiff-strawed, heavy yielding, six-rowed bearded variety. It is about the same as Manshury in time of maturity, manner of growth and general appearance, but has a plumper kernel and weighs more to the measured bushel.

Velvet Barley. (Smooth Awned, Minnesota No. 447). This variety was developed by the Minnesota Experiment Station to answer a demand for a barley not having the old objectionable saw toothed beards. A cross between six rowed varieties and a black, smooth awned variety from abroad. Yields well and is resistant to the spot blotch disease.

Wisconsin No. 38 Barless Barley. A new variety of smooth awned Barley developed by the Wisconsin station. It is resistant to Barley stripe, has a larger head and plumper kernel, and is about 4 days later than Velvet or Oderbrucker. In Wisconsin it is reported as yielding from 5 to 20 bushels per acre over other varieties. It seems to stand the heat and dry weather better than the Barleys that mature earlier, many yields of 40 to 50 bushels being reported. Regarded as a fine malting variety.

BUCKWHEAT

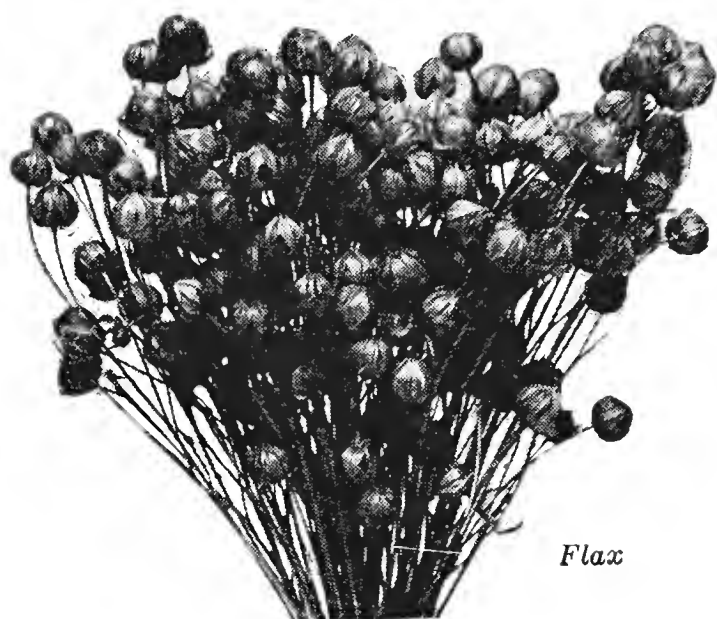
Japanese Buckwheat. Entirely distinct from all other varieties. It has the advantage of remaining for some time in bloom and produces seed earlier. On this account it can be grown farther north. It resists drouth and blight very well. The seed is rich dark brown in color and larger than Silver Hull. As much as forty bushels to the acre have been harvested of this variety. Usually commands a premium over Silver Hull.

Silver Hull Buckwheat. This valuable variety originated abroad and is a decided improvement on the old black or gray sort. It is early, remains longer in bloom than other sorts. A fine variety for honey bees. The grain is of a beautiful light gray color, and has a thin husk. Silver Hull is more productive and the grain meets with a ready sale. Under favorable conditions it will yield 40 to 50 bushels an acre.

FLAX

Prof. Bolley of the N. D. Experiment Station especially recommends "plump, bright colored seeds—because they probably grew upon strong or vigorous mother plants and are thus not likely to be internally diseased."

Northland Brand Flax is meeting with approval throughout the Northwest. It ripens in mid-season and under favorable conditions, yields splendidly. Cleaning Flax so as to make it suitable for seed is an expensive operation, requiring special machinery and often involves considerable waste, but we take great care to do this thoroughly. Send for sample and note its splendid quality.



Flax

FLAX— Cont.

Bison. A new large seeded Wilt Resistant Variety, developed by the North Dakota Experiment Station. This variety has proven more satisfactory than any other for growing particularly on older farms in Minnesota and Dakota. Will bring a premium on the market on account of greater oil content.

OATS

Anthony Oats. A midseason variety, which is a cross between White Russian and Victory Oats developed for resistance to stem rust, stiffness of straw and heavy yield. Especially adapted to Northern half of Minnesota.

Gopher Oats. An excellent high yielding oat, developed at the Minnesota Station. It is a plump, fairly heavy, early oat with a stiff straw. Very popular with growers where early maturity is desired.

Iogold Oats. Iogold Oats were developed by the Iowa Station. Has three distinct qualities which recommend it: Stiffness of straw, resistance to rust and a high yield. It is an early yellow oat, selected from Kherson and has done exceptionally well in Minnesota and Wisconsin. For growing on land where lodging and rust are to be expected. Iogold is recommended as superior to any of the tested varieties in ability to stand up and yield.

Iowa No. 103 Oats or White Kherson. Originating from stock bred by the Iowa Agricultural College, the Iowa 103 Oat has proved its value as a heavy-cropper. One hundred bushels per acre is not unusual.

The grain is not large but is plump and heavy, with a thin hull. During growth the yield is deceiving but the results at threshing time prove its value as a prolific producer of grain high in food value. The straw is of excellent strength and on good soil stands up unusually well.



*Swedish
Select
Oats*

Lincoln Oats. Reg. U. S. Pat. Office. We believe the "Lincoln" to be as fine an oat as is grown. Hundreds have written that, on account of its stiff straw, it stood up perfectly under weather that caused other varieties to lodge. It is the best and most economical oat for feeding on account of its thin hull, heavy meat and soft nib. The Lincoln Oat has a sprangled tophead.

Swedish Select Oats. Swedish Oats have given general satisfaction.

Its habit of growth is so vigorous that on heavy soils it is likely to lodge, but for light soils it has no superior.

Yellow Kherson Oats. The original seed of this valuable oat was secured in Russia by the U. S. Dept. of Agriculture.

OATS—Cont.

It is a small yellowish oat that weighs about 34 pounds a bushel. The hull is very thin, being easily shelled off in threshing if the concaves are set too closely."

Victory. A medium height early oat developed by the famous Svalof Station in Sweden. An excellent yielder of the Swedish Select type, but in most seasons yields greater and better quality.

RYE

Rosen Rye (Winter). A variety introduced by the Michigan Experiment Station. Bright yellowish, plump, heavy kernels. Strong, stiff straw. Heavy yielder.

Spring Rye. True Stock, Spring Rye makes an excellent crop where winter grain has been killed out, or for sowing where a fall crop has not been planted. If desired it can be turned under and made to answer a good purpose in adding to the fertility of the soil. Sow seed same time as other spring grain. Does not grow quite so large straw as Winter Rye, but usually yields as well and grain is of fine quality.

Spring Rye

SPELTZ OR EMMER

It is found to be adapted to a wide range of soil and climate, to resist extremes of weather, to be of superior feeding value and to yield so much more heavily than oats and barley as to insure its increasing popularity.

WHEAT

Durum or Macaroni Wheat. Out-yields any other variety of Spring Wheat and has proved to be practically immune to the dreaded rust. In growing it resists extremes of weather which no other wheat will endure. In the field this wheat grows very strong and with surprising rapidity, so rapidly as to get well ahead of the weeds. It does not shell or bleach; is almost hail proof owing to the tightness of the hull.

Marquis Wheat. Pronounced by both farmers and millers the finest for the northwestern spring wheat territory. Marquis Wheat grades No. 1 Hard and is of splendid appearance. Millers prefer this variety because of its splendid milling qualities and high gluten content. Marquis is a beardless wheat, having smooth, yellow chaff. The kernel is flinty, very dark red. It weighs 62 to 64 pounds per bushel but is susceptible to rust.

Marquis Wheat

Thatcher Wheat. A new variety of Spring Wheat developed by the Minnesota Experiment Station for its resistance to stem rust. For several years Thatcher Wheat has consistently outyielded other varieties of Spring milling wheat in the North Central States and Canada. It is a good milling wheat, selling on a par with Marquis, Reward and others.

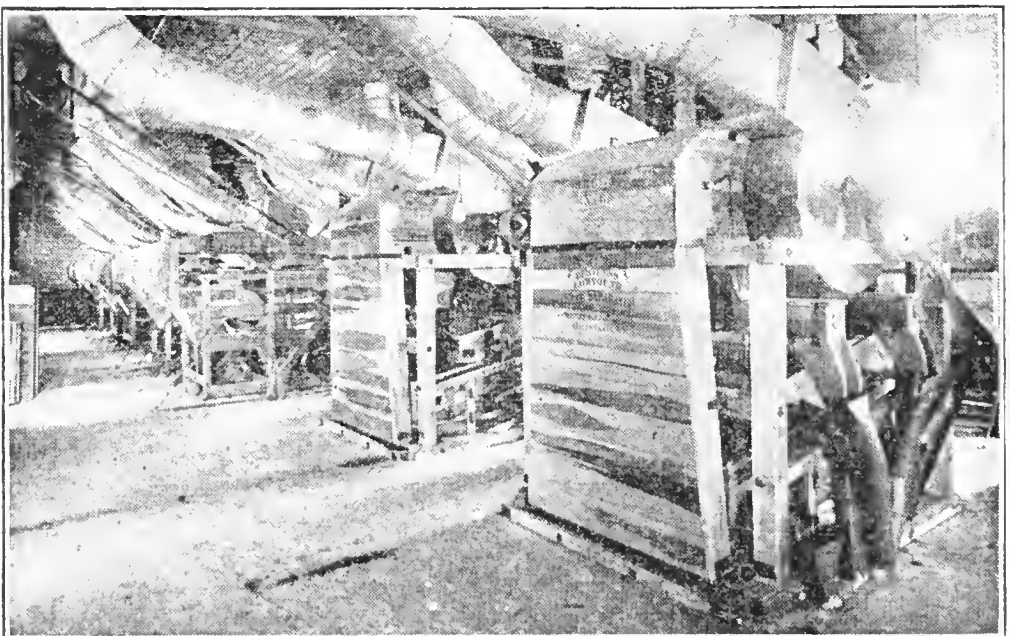
HOW FARM SEEDS ARE MADE SAFER AND MORE PROFIT- ABLE TO PLANT

THE importance of the seed business lies in the fact that it is an essential cog in the process of agricultural production upon which man depends for his food supply. Furthermore, those who use our seeds depend to a large extent upon what they produce for their livelihood; and regardless of other conditions, it takes good seed to produce good crops. For these reasons our Company has always felt a very great responsibility in connection with the quality of the seed that we send out.

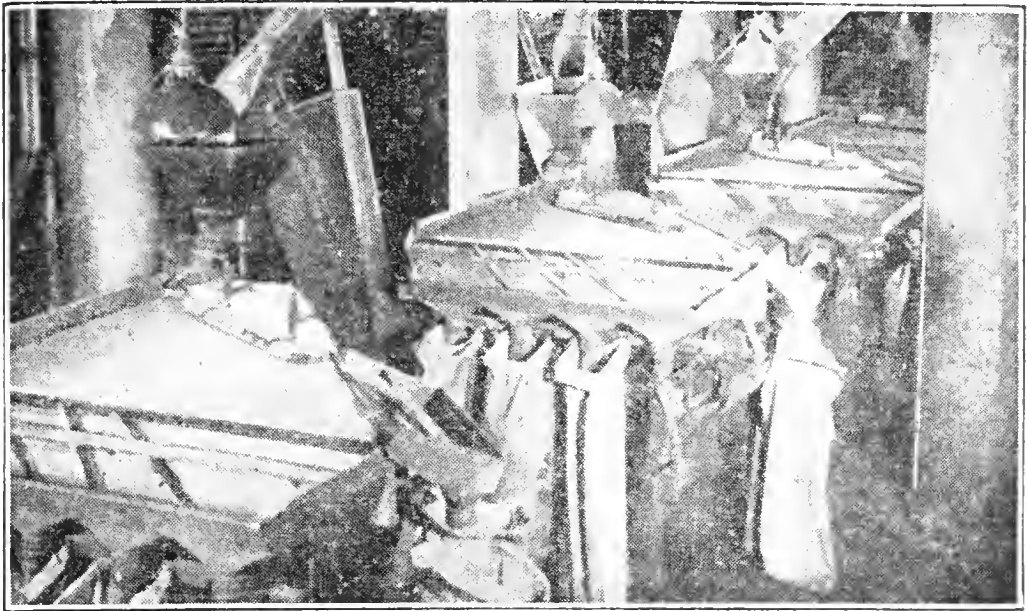


A section of Northrup, King & Co.'s seed testing laboratory, equipped with the most modern devices for accurate seed analysis and testing.

Insofar as farm seeds are concerned, we control quality at three points. The first is at the source through our buying organization. It is evident that if you want to sell good seed, the first thing to do is to buy good seed, and with that purpose in mind, it is our policy to secure our seeds direct from the producing sections through our own trained buyers. Buying carefully in this way and handling a large enough volume to enable us to select the best of each crop, it is possible, as in no other way, to keep our brands not only high in quality, but uniform in quality.



A battery of air and screen seed purifying machines in Northrup, King & Co.'s cleaning plant. Here also is complete equipment of gravity, disk, and cylinder machines.



Some of the gravity machines in Northrup, King & Co.'s cleaning plant. These machines are slower than other purifiers, but very efficient on such items as clovers and alfalfas.

The second point at which we control quality is through our laboratory. Years ago we used to buy seed merely by looking at samples and basing our bids on experienced observation alone. Today we check our judgment by a laboratory test on every lot before it is bought and every lot is tested at least five times, and frequently more, at various stages of processing, before it finally leaves our hands.

The third factor that determines quality is the cleaning process. Here we have provided the best of modern equipment, our many years of experience has taught us how to use it, and our men are required to maintain a quality of workmanship that will protect the reputation of our brands.

Our customers naturally wish to feel sure in buying seeds that they are not paying too much, and for this reason, we are constantly meeting with pressure from the price standpoint. No one who has not had personal experience in cleaning seeds, can appreciate how much costs are increased by the shrinkage that a really first class job requires. There is always the greatest temptation therefore, to reduce this cost by lowering our standards of quality in order to be able to sell our seeds for less money. This temptation is particularly great because we



Every fall and winter hundreds of thousands of dollars worth of seeds are stored on several floors of Northrup, King & Co.'s warehouses where proper temperature and moisture conditions are maintained.

know that so far as the appearance of the seed is concerned, few, if any, of our customers would be able to tell the difference if the change was not too great. It is worth while, therefore, to ask the question why we do not follow the line of least resistance in this respect because the answer throws a good deal of light on the fundamental policies of this company.

There are four reasons for maintaining our standards at the highest possible point.

- (1) If we were to abandon our standards of quality and begin to sell on a price basis, there is no logical stopping point in this direction. It is evident that there is no permanent advantage to be gained in a contest to see who can sell the poorest seeds for the least money.
- (2) "Buy my seeds because they are just as good as Northrup, King & Co.'s and I will sell them for less." This is the argument that planters and dealers hear many times applied not to seeds alone, but to every line of merchandise that represents the standard of quality in its particular field. We have set the standard of quality in our territory for many years, so far as seeds are concerned, and we propose to continue to do so. This, however, can only be done by maintaining the quality of our brands at the highest possible point. If we reduce our standards, we at once put ourselves on the same plane with numerous other competitors. Anyone can do that kind of a job.



Looking down on the tops of tiers of racks of Sterling Seed Corn and Kingscroat Seed Corn being dried on the second floor of Northrup, King & Co.'s drying plant.

- (3) While it is true that it is difficult, if not impossible, for dealers and farmers to accurately judge the quality and value of seed by looking at it, nevertheless, the vital fact remains that in the long run consumers do recognize a dependable quality and fair value as determined by practical results. That is the foundation upon which our business has been successfully built and in spite of the admitted difficulties involved in the fixed policy of maintaining our standards at all costs, over fifty years of experience proves that it pays.
- (4) There is a greater satisfaction in doing the best job we know how to do than in doing the poorest job that that we think we can get away with. We prefer to do the best job possible, to give the consumer the greatest possible real value, and then put it up to ourselves to make a fair profit by good management. We believe that such a policy not only gives the greatest satisfaction, but is the best foundation for enduring success.

BUY FARM SEED BY BRAND

A BAG of seeds without identification by brand, or sponsor's name, carries no responsibility for the quality of the seeds. But when a bag bears the brand of a firm whose reputation may be investigated—and the seed contained is the original lot placed in the bag and protected by machine sewing at the top—then you know the owner of the brand is placing his reputation back of the quality of the seed in that bag.

Seed sold without identification is usually lower in price than branded seed and usually price is its most attractive feature. Any seed distributor with enough sales volume to justify him in selling his seeds under brands is usually equipped with sufficient purifying machinery to do a good job. The larger seed firms have very complete equipment for purifying. In addition they have modern seed testing laboratories which enable them to maintain uniformity of quality in their brands.

Northrup, King & Co.'s farm seed brands "Sterling" and "Northland" have established seed quality standards in the Northwest which are considerably above the standards of other sections of the country.

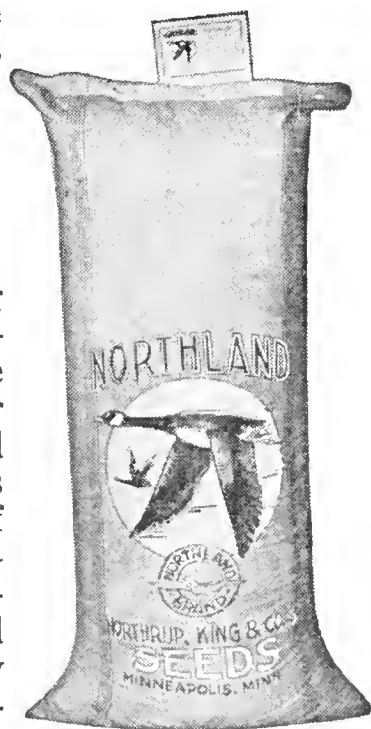


STERLING BRAND

This brand on a bag of farm seeds assures the highest quality offered in the Northwest. No other seed house offers a quality, and a brand, to compete with it. Since it is of extra premium quality it must sell at a somewhat higher price than asked for inferior qualities sold under competitive brands. Sterling Brand quality is not available every year in all the varieties of farm seeds. When, in any season, seed crops of certain items are not superior enough to make Sterling—there is no Sterling offered.

NORTHLAND BRAND

After many years of seed handling in the Northwest, we adopted Northland as the brand representing the highest quality we could maintain year after year. All seed branded Northland is carefully selected, plump, vigorous and of good color. Nearly all items of farm seeds are offered every year under this brand. Because of its availability, uniform dependable quality, and popular price this brand has a very large sale over the Northwest. In quality it is second only to Sterling.

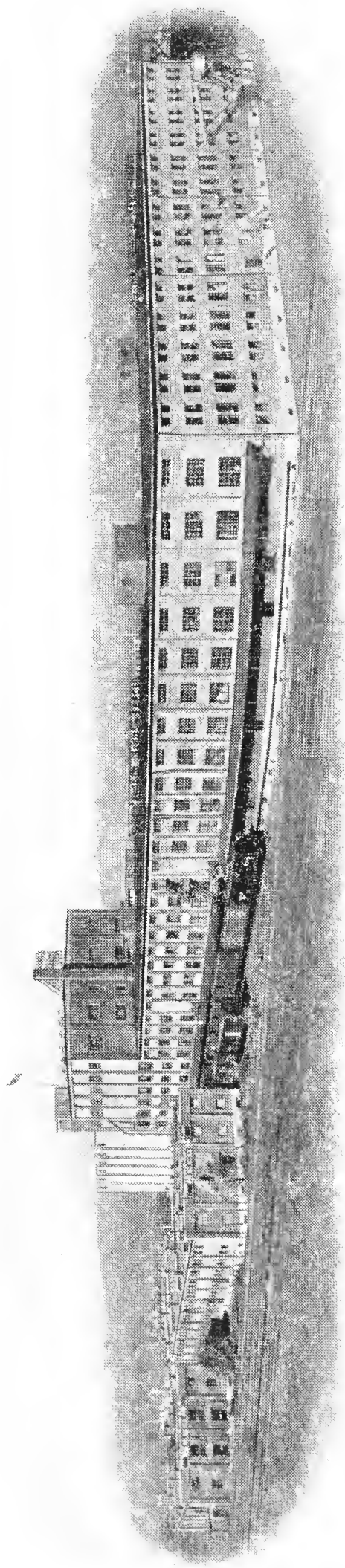


If you want the best in farm seeds, ask for Sterling Brand. In the average of years you will find it pays to plant this premium grade when it is obtainable. But if you are thrifty—want to save a little money and still obtain high quality seeds—plant Northland.

Northrup, King & Co.'s Farm Seeds in branded bags have behind them over 50 years reputation for producing excellent crops.

You Are Invited To Visit This Large Seed Plant

See how seeds are tested for purity and germination; how they are purified by use of several ingenious machines; how permanent records of each lot of seed are kept; how they are accurately weighed; sacked; stored under proper temperature and moisture conditions.



This is the largest general seed house in the country—the result of over 50 years of conscientious seed service to Northwestern planters.

Located just north of the Minneapolis business “loop” two blocks west of 15th and Central which is U. S. Highway No. 65 and 8

NORTHROP, KING & CO. 1500 Jackson St. N. E. MINNEAPOLIS, MINNESOTA